

REMARKS

This amendment is in response to the Official Action mailed July 16, 2003. In the present paper, Applicants have amended claims 1, 9, 11 and 17, have added claim 21-24 and have canceled claim 12. All amendments are fully supported in the specification. Claims 1-11 and 13-24 are now presented for the Examiner's consideration in view of the following remarks:

The Present Application

The present application is directed to a wireless network, and, more particularly, to a wireless network that permits use by a non-subscriber. The network can be used on a "walk-in" or a "pay as you go" basis.

Wireless network use today typically requires some sort of subscription or prearranged contract. Examples of such networks include wireless telephone systems, wireless personal communication systems, and wireless paging systems. Users of wireless communication devices such as mobile telephones, personal computers with wireless network interfaces and personal digital assistants (PDAs) with wireless capability must pre-arrange for network access with a wireless network provider and then identify themselves or their devices each time they use the network. The network provider ascertains from that identification that the user has a valid subscription before permitting the user to use the network.

The present application is directed to a network providing access to a user without requiring a prearranged subscription. Instead, payment or a guarantee of payment is obtained from the user for the immediate session only. A walk-in user can then access the network.

Amended claim 1 of the present application is directed to a method of providing temporary wireless services on a pay-per-use basis over a wireless local area network. The method includes the steps of providing a temporary wireless service connection to a non-subscribing user, determining a usage amount incurred by the user for the temporary wireless service connection; and charging the user for the determined usage amount for the temporary wireless service connection.

As noted in the specification, the non-subscribing user is not required to commit to a wireless service contract; instead, the services are provided on an "as-used" basis (specification, page 4, lines 6-8). Claim 1 requires that the wireless services are temporary; i.e., the services are not set up in a prearranged contract.

Amended claim 9 is directed to a method for providing a temporary wireless service connection to one or more users in a wireless local area network. In that method, a request is received from a user for temporary wireless service. A temporary wireless service connection is established for the user. In establishing the connection, a dynamic host configuration mechanism apportions an IP address to the user for a limited time interval. A usage amount is determined for the temporary wireless service connection for the user. That usage amount is based at least in part on the number of minutes in the limited time interval. The user is then charged for the usage amount for the temporary wireless service connection.

The embodiment of claim 9 takes advantage of a "DHCP-like" protocol, which may be DHCP (dynamic host configuration protocol), to provide an IP address to a user on a "lease" basis; i.e., the IP address has a term that expires at the end of some time interval (specification, page 6, lines 1-11). That arrangement provides an efficient way to limit wireless network access

for billing purposes. The user is charged for the lease term of the IP address, and is unable to access the network outside that term.

Claim 17 of the present application, as amended, is directed to a system for providing a temporary wireless service connection to a user's wireless device. The system includes a wireless device; and a local wireless network for establishing a temporary wireless service connection to the wireless device, determining a usage amount for the temporary wireless service connection, and charging for the usage amount for the temporary wireless service connection. The local wireless network includes a dynamic host configuration mechanism for apportioning an IP address to the user for a limited time interval. The determined usage amount for the connection is based at least in part on the time interval.

The inventors have discovered a simple and powerful technique for permitting non-subscribers to use a wireless network. In one embodiment, the "DHCP-like" protocol enables the system to limit the time interval during which the user has network access, without adding custom protocol exchanges.

The Examiner has rejected claims 1 and 17 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,571,221 to Stewart et al. (Stewart). The Examiner has also rejected the remaining claims under 35 U.S.C. § 103(a) as being unpatentable over Stewart in view of various combinations of additional art. Claims 2-6 stand rejected over Stewart in view of U.S. Patent No. 6,480,485 to Kari et al. (Kari). Claim 7 is rejected over Stewart in view of U.S. Patent No. 6,496,499 to Hamilton et al. (Hamilton). Claim 8 is rejected over Stewart in view of U.S. Patent No. 5,751,798 to Murnick et al. (Murnick). Claims 9-12 and 18-20 are rejected over Stewart in view of U.S. Patent No. 6,298,234 to Brunner (Brunner). Claims 10-12 and 18-20 are also rejected over Stewart or Brunner in view of Kari. Claims 13-16 are rejected over Stewart or

Brunner in view of U.S. Patent No. 6,490,443 to Freeny et al. (Freeny). Applicants respectfully submit the claims as amended are novel and non-obvious for the reasons stated below, and that all the claims of the present application are in condition for allowance.

The Stewart Patent

Stewart discloses wired and wireless network access models in which digital certificates are used to verify the identity of a subscriber. Access is provided only for subscribers, and the disclosure uses the terms “mobile user” and “subscriber” interchangeably (Stewart, col. 3, lines 26-29). The mobile user in the Stewart system has an identification code to allow the system to recognize the user before permitting access (Stewart, col. 6, lines 10-32). Stewart discloses the use of a digital certificate for securely exchanging authentication information (e.g., Stewart, col. 11, lines 24-31).

“Charging information,” for use in charging the subscriber for network access, is stored in a database server in the network access system for retrieval when the subscriber accesses the network (Stewart, col. 12, lines 22-32). The charging information may include information regarding participation in incentive programs, or may reflect the amount of available network access time available for a particular subscriber. The database server may also store demographic information about the subscriber (Stewart, col. 12, lines 10-21). Such a system presupposes that the user is a subscriber that has previously registered or contracted with the network provider to provide wireless access.

Stewart does not teach or suggest any use of the DHCP protocol, and specifically does not disclose the use of DHCP in limiting the duration of a particular connection by limiting the lease time available on an IP address.

The Kari Patent

Kari is directed to a cellular network such as the Global System for Mobile Communication (GSM). Kari does not disclose any elements relating to a local area network.

In rejecting claim 2, the Examiner cites Kari at col. 4, lines 46-53 as disclosing “dynamically assigning an IP address to a user.” Applicants respectfully disagree with the Examiner’s interpretation of that passage. Kari instead discloses mapping IP addresses of mobile stations with the “GPRS roaming identity of the mobile station in the GPRS network.” There is no indication in Kari that the IP addresses are dynamically assigned.

Kari furthermore does not disclose the use of any dynamic host configuration or “DHCP-like” protocol, and does not discuss the assignment of IP addresses for limited time intervals.

The Brunner Patent

Brunner discloses a system and method for providing Internet access to a roaming mobile subscriber. The subscriber invokes the service by entering an alphanumeric string. The system verifies the identity of the subscriber using a “subscriber’s service profile database” (Brunner, col. 5, line 22).

Discussion

Independent Claims 1 & 17

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

The Examiner has rejected claims 1 and 17 of the present application as anticipated by Stewart. Applicants submit that those claims, as amended, are neither taught nor suggested by Stewart and that those claims are therefore patentable over the cited art.

The first step of claim 1 recites providing temporary wireless services to a non subscribing user. In contrast, Stewart discloses providing subscription wireless services to a subscriber. Stewart does not address or solve the problem addressed by the invention claimed in claim 1: permitting a non-subscribing user to use a wireless network connection.

For those reasons, Applicants assert that claim 1 is patentable over Stewart. Applicants further assert that the claims 2-8, 21 and 22, which depend from claim 1, are patentable for at least the same reasons as the parent claim.

Applicants assert that claim 2, which depends from claim 1, is patentable for the additional reason that neither Kari nor any other art of record discloses “dynamically assigning an IP address to the user,” as required by claim 2. As discussed above, Kari teaches mapping mobile network addresses with roaming identities, but does not discuss dynamic IP address allocation.

New claim 21 is asserted to be patentable over the cited art for the additional reason that none of the art of record teaches or suggests “using a dynamic host configuration mechanism to apportion an IP address to the user for a limited time interval.” As noted in the above discussion of Kari, that reference does not teach dynamic assignment of an IP address to a user and does not teach dynamic host configuration. For those additional reasons, applicants assert that new claim 21 is patentable.

Claim 17 was similarly rejected by the Examiner as anticipated by Stewart. That claim has been amended to require the following element:

the local wireless network including a dynamic host configuration mechanism for apportioning an IP address to the user for a limited time interval, the determined usage amount being based at least in part on the time interval.

Neither Stewart nor Kari, nor any other art of which applicants are aware, teaches the use of a dynamic host configuration mechanism in apportioning an IP address lease in the context of a temporary wireless service connection wherein the user is charged for the leased time. For that reason, Applicants submit that claim 17, as amended, is patentable over the references cited. Applicants further assert that claims 18-20 and 24, which depend from claim 17, are patentable for at least the same reasons.

Claim 24 is asserted to be patentable for the reason that it requires that the user be a non-subscribing user, as discussed above.

Independent Claim 9

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. § 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

The Examiner has rejected claim 9 as unpatentable over Stewart in view of Brunner. Claim 9 has been amended to require that

(1) in the step of establishing a temporary wireless service connection for a user, “a dynamic host configuration mechanism apports an IP address to the user for a limited time interval”; and

(2) in the step of determining a usage amount for the temporary wireless service connection for the user, "the usage amount [is] based at least in part on the number of minutes in the limited time interval."

Applicants submit that no prior art of which they are aware discloses the use of the limited time interval ("lease") feature of dynamic host configuration in enforcing a usage amount for which a user is charged for a temporary wireless service connection. For that reason, it is submitted that claim 9 and dependent claims 10, 11, 13-16 and 23 are patentable.

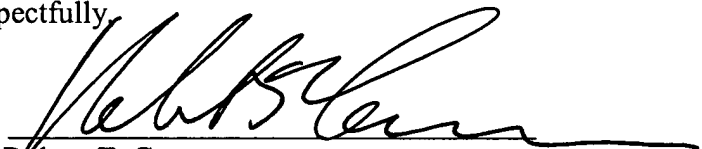
Conclusion

Applicants therefore submit that none of the claims presented in the case are anticipated by or obvious over the relevant art, and assert that claims 1-11 and 13-24 are now in condition for allowance. Applicants earnestly request that the Examiner issue a Notice of Allowance.

Should the Examiner have any questions regarding the present case, the Examiner should not hesitate to contact the undersigned at the number provided below.

Respectfully,

By


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